

An Inquiry into the British Status of the Genus *Trichodes* Hbst. (Col., Cleridae)

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Two species of this interesting Malacoderm genus, *T. apiarius* L. and *T. alvearius* F., figure in most of the older works on the British beetles as great rarities in this country. Both are very conspicuous and handsome insects, sure to attract the attention of even the non-coleopterist whenever met with. At 10-16 mm. in length they are the largest Clerids recorded in Britain, instantly known by the alternate dark blue (or violaceous) and red or orange bands across the elytra—the rest of the body being metallic blue or greenish-blue and very hairy—and the broad, compact and abruptly truncate antennal clubs. They differ in the disposition of the coloured bands and are readily distinguishable from each other by the fact that the apex of the elytra is purplish-blue in *apiarius*, but orange or red in *alvearius*; the latter species, moreover, which tends to be the larger*, has the head and thorax very strongly and densely punctured, and the surface less shiny with longer hairs—especially at the sides of the thorax and on the legs. They are usually found on flowers in June, and chiefly those of Umbelliferae.

Canon Fowler, the standard authority on our Coleoptera, lists the captures known to him (1890: 172)—3 or 4 under each species, to be considered later. Besides these, which all appear to have taken place before the middle of last century (and mostly a good deal earlier), there certainly exist, in our older or larger collections, further specimens with minimal or no data; but the total number of reputed British examples of both species together, recorded and unrecorded, can hardly at the most generous estimate exceed 18 or 20 and is probably nearer 12 or 15. One is struck by the apparently total cessation of captures from the above period onwards, i.e. over the last 100 years and more—although, as will be seen, there is a single hitherto unpublished recent find.

Fowler includes the two species with considerable reserve, and as probably introductions; pointing out that as the larvae prey on those of bees, the insects might easily be imported in some stage in foreign hives. Since the coral-red larvae have been known from antiquity as injurious to bees on the Continent (though it is also suggested that they may be scavengers rather than predators, attacking mainly diseased or sickly grubs), the above explanation of the beetles' occurrence in Britain appears reasonable enough; and it has been generally adopted by entomologists. The two species have thus since Fowler's time been dropped from our list, as being evident aliens. It is the object of this paper to see whether or not that assumption will stand up to more critical scrutiny than it seems to have yet received, and what evidence, if any, can be adduced in its favour.

If we look a little into the history of British apiculture, as recorded in the literature of the subject, two negative but highly pertinent facts emerge. Firstly, the standard authors who deal with the pests and predators of our bees, with one exception, make no mention of *Trichodes*. Only the Rev. William Durbar (1840) remarks that '*Clerus Apiarus*'—of which

*This applies to the few British specimens I have seen, but authors give the same length for both species.

he gives a coloured figure—was known to Aristotle as feeding in the larval state on bee larvae in hives, but goes on to say “we have never heard of an instance of such being met with, or injurious to bees, in this country”. (He was writing, be it noted, at a period when occasional British captures of the beetles were probably still being made.)

Secondly—and even more significant—a perusal of the literature shows that *importation of hives, combs, or bees in any stage is not known to have occurred before 1859; by which time captures of Trichodes had already virtually ceased.* If such importations took place at all, therefore, they must have been on a practically negligible scale, or they would surely be mentioned by such an authority as Dr. Malcolm Fraser in his *History of Beekeeping in Britain* (1958). There was, indeed, no need for them; beekeeping had been an established practice in this country from exceedingly early times, our stocks had been built up over the centuries, and no beekeeper would have gone to the trouble and expense of getting hives from abroad when they were so easily made at home from the most ordinary and abundant materials. It was not until 1859 that queens of the Ligurian bee (the subspecies *ligustica* Spin. of *Apis mellifera* L.) were imported from Italy by Thomas Woodbridge of Exeter; and the Carniolian subspecies was introduced as late as 1870.

The very scanty published records of *Trichodes* in Britain include no mention, as far as I know, of a capture in, on, or about a beehive, or in the vicinity of a bee-farm, as must have occasionally happened had the beetles or their early stages been introduced as above. One cannot imagine such showy insects or their almost equally striking larvae being wholly overlooked by our beekeepers, who were mostly well-educated professional men probably conversant with some of the foreign literature of the subject and thus not entirely ignorant of the ‘beehive beetles’ even if they had never seen one.

From this it appears that not so much as a scrap of evidence exists for any connection between these Clerids and domesticated bees in Britain, and *the common assumption that foreign hives were the source of the beetles collapses as soon as examined.* Against the argument that they might have been derived from importations too few to have been noted in the books, it can at once be objected that, in that case, there would be no reason for captures of *Trichodes* to have practically ceased by the mid-century; on the contrary, they should have become more frequent from that time on, when there is no doubt that bees *were* occasionally (*ex hypothesi*, more often) imported from countries where the beetles are common. Similar considerations apply to any idea of spontaneous immigration as the source of our specimens, besides the lack of evidence for such a habit in the genus.

Another point could be brought against the theory of introduction. Fowler (p. 171) remarks that no less than 17 species of the genus occur in Europe, mainly the warmer parts; most of which appear to have a similar mode of life (though some are associated with other Hymenoptera). Yet no species, other than *apiarius* and *alvearius*, is on record as having been found in Britain, as would be expected to happen occasionally if they were liable to casual importation.

There remains, then, the alternative—never yet, I believe, seriously considered—that the two species in question were true natives which became extinct about the mid-century. Let us see whether, after all, there are any fatal or even material objections to it.

Fowler raises what at first looks like one, when he writes (p. 168) that the genus *Trichodes* "has certainly occurred in Britain on several occasions, and seems to have almost, if not quite, as good a claim to admission as indigenous as *Tarsostenus*; as, however, Mr. Gorham is of opinion that the two species which have been found in Britain . . . are strictly Alpine insects, I have only included them doubtfully". On this point, however, Gorham must have made some mistake, for none of the Continental authors appear to indicate such a restriction; on the contrary, both species are given as occurring throughout the greater part of, e.g., France and Germany, and, though common in Alpine regions, as not specially mountain insects. The objection, therefore, cannot be sustained.

Nor is there any feature of their actual distribution abroad which precludes their having once belonged to our fauna. Scores of species well known as British, some fairly common and others rare, have a similar European range centred more or less in the south but spreading over mid-Europe, and attaining their north-westerly limits in our islands. This distributional group includes species that seem to have died out here about the same time as the two *Trichodes*—as, for instance, our two finest *Rhynchites*, *R. avratus* Scop. and *R. bacchus* L. (These two species, incidentally, are retained on our list—as, in my view, *T. apiarius* and *T. alvearius* should have been.) Thus, there is clearly no *a priori* reason why these Clerids should not have been indigenous to Britain.

Being on the extreme edge of their natural range, their survival in England (the most northerly record for both is from the Manchester area) would be precarious and liable to be terminated by any adverse factor such as a gradual climatic deterioration. The few sporadic captures would represent some of the last lingering remnants from a more favourable past. They had probably been rare for a very long time; and having become attached to species of wild bees, their rarity and loss of adaptive power would hinder any spread to, and infestation of, hives; which would account for the want of reports of them by apiarists.

From the records themselves, unfortunately, next to nothing can be learnt. Circumstantial details have been published in one case only, as far as I am aware; they are worth quoting in full.

Under *Clerus apiarus* L, Stephens (1830: 326) writes: "I was present at Coombe-wood, near Dover, in June, when Mr. Stone beat a specimen of this elegant insect out of a hawthorn bush, but which escaped; but a second example was subsequently taken near the same spot and forwarded to him, and which is now in the collection of Mr. Bentley. The insect has also been taken in Norfolk, and near Manchester". Whilst, of course, nothing certain is deducible, this hardly sounds like a casual importation, and the fact that *two* specimens occurred in the same locality is suggestive. Fowler gives the above records and adds 'New Forest'; I do not know the source of this, but the area is one more famous for native rarities than for introductions. My specimen of *apiarius*, purchased from E. W. Janson's collection, is labelled 'Mr. Chant'; and there is a very old and decrepit one in the Power collection, labelled merely 'B. M. Coll.'

In the Manchester Museum is one from the J. Sidebotham collection labelled 'Ichniton [?]/1868' and what looks like 'Carsalton' (Carshalton in Surrey?), but neither name is fully legible. The first may be that of a collector, and the year that in which Sidebotham acquired the specimen.

Another, *ex coll.* J. Ray Hardy, is labelled 'Manchester market'; but it cannot well be the one mentioned by Stephens as taken *near* (not *in*) that city, which should have belonged to an earlier period when it was most unusual to attach any data at all to an insect. A market suggests importation, which indeed may have been the case with this specimen. If, however, the species had occurred in the area a long time previously, it is not even a very high probability, and a breeding-site somewhere in the surrounding country is more likely to have been the source of both.

For *T. alvearius*, Stephens may again be quoted (*ibid.*): "This insect is also said to have been taken near Manchester, but a most magnificent specimen is in the collection of Mr. Chant, which was 'taken near Dorking, in June'—Mr. Waterhouse". Fowler adds: "There is a specimen in Dr. Power's collection, without locality, taken by Mr. Buxton" (it is still extant). Another from the same collector is in the Manchester Museum, as is also one marked 'Hartwright' (clearly a person's name)—both *ex coll.* Sidebotham. Of this species I possess a very fine example, at the upper limit of size, also from the Janson collection and labelled 'Mus. Desvignes'.

It is, of course, quite possible that one or two of these reputedly British specimens of either species are of foreign origin, but that cannot well be the case with all.

I now give the one and only modern record known to me of a *Trichodes* in Britain, not previously published (except, no doubt, in the annals of the undermentioned Society). A specimen of *T. apiarius* was taken in June 1950 on an umbelliferous flower beside the River Lea near Tottenham, N. London, by Mr. M. Shaffer, and shown at a fairly recent Exhibition of the South London Entomological and Natural History Society. From the nature of the locality, and the fact that there are timber wharves nearby, the insect can scarcely be regarded as anything other than a chance introduction; but the find is of interest as showing that *Trichodes* may still be met with occasionally in this country, and is, perhaps, a further point in favour of their reinstatement in our list. A casual individual might come to be thus imported through the fact of bees having nested in an unusual situation. This, of course, has no bearing on the status of our ancient specimens; for over 100 years in the records would be inexplicable on the basis that all our examples were importations.

To sum up: all available evidence seems to point in one direction, viz., away from the accepted notion that *Trichodes apiarius* and *alvearius* were aliens in Britain, owing their occasional presence here to foreign beehives, and towards the conclusion that they were ancient survivals of the indigenous fauna which 'died out during the historic period of British coleopterology.

I am indebted to Mr. M. Shaffer, of the British Museum (Nat. Hist.), for permission to publish his notable capture; and most particularly to Mr. W. E. J. Hooper, the County Beekeeping Instructor of the Essex Institute of Agriculture, for his kindly interest and very willing provision of much valuable information in his special field; also to Mr. F. W. H. Auld and my friend Mr. G. Shephard for their good offices in that connection, and to Mr Colin Johnson, of the Manchester Museum, for details of the material in the British collection there.

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Notes and Observations

LEUCANIA UNIPUNCTA HAW.: A TEMPERATURE EFFECT.—I have recently reared a brood of this migrant moth from the egg stage. It was found that the larvae grew very uniformly, pupation taking place over quite a short period. As a safety precaution, the pupae were divided into two batches, one of which was held within the temperature range 60°-80°F., whilst the other batch was treated to the cooler range of 40°-65°F.

In both batches, losses were very small and emergence occurred over quite short periods. Apart from a few stragglers, the higher temperature range batch emerged during the period 24th-29th November and the lower temperature range batch emerged during the period 17th-22nd December.

The two batches show a distinct colour difference, the moths of the higher temperature range being darker in general appearance over all wings. This is largely due to a deepening of the ground colour, but there is also, especially in the males, a heavier sprinkling of black scales.—T. D. FEARNEHOUGH, 26 Green Lane, Shanklin, I.O.W.

STIGMELLA PULVEROSELLA STT. AND S. GLUTINOSAE STT. (LEP. NEPTICULIDAE) IN SCOTLAND.—In October I received from Martin Speight some Nepticulid mines which he had collected the previous month in Scotland. There were two species, *Stigmella pulverosella* Stt, on *Malus* from Strathardle, Perthshire, and *S. glutinosae* Stt. on *Alnus* from Ballachulish, Argyllshire. They are, I believe, unrecorded from Scotland.—S. C. S. BROWN, 158 Harewood Avenue, Bournemouth. 28.xii.1966.

BUTTERFLIES IN NORWAY.—We have had a very bad season in Norway, in fact the past three years have been very bad as regards bugs. This summer, there has been nothing worth taking; I saw a large number of scarce coppers and purple edged coppers down in the south during my summer holidays but I did not take any as I have full series of both in my collection. Many species that were common in Oslo district have disappeared during the last four or five years. The Queen of Spain fritillary was very common; I took a fine series of eight in the palace gardens in the centre of Oslo one afternoon (have you got any flying in the gardens of Buckingham Palace, London?). The comma was also very common, but I have not seen one for five years now. *Antiopa* could also be seen in the suburbs, but that too has vanished. I found two in my cellar last winter; they were perfect specimens and I think they must have been brought in with a load of wood I had in from Sweden. During my twenty years of collecting in Norway I have only taken seven small whites *P. rapae*; it is very scarce here, but *P. napi* is very common including many variations.—HENRY LEE, Sons Gate 7ii Opg. I, Oslo 6, Norway. 28.xii.1966.